

soft rays, which are bifid at the end, and form a convex posterior margin. Anal fin very short, composed of four rays only, which are opposed to the posterior dorsal rays. The base of the pectoral fin is fleshy and enveloped in skin, as in other *Pediculati*. It is composed of eighteen simple and feeble rays. Ventral fins none. Vent situated immediately behind the abdominal sac. The whole fish, even the inside of the mouth, of the abdominal sac, and of the stomach, is of a uniform deep black.

Total length (mouth closed) $3\frac{8}{10}$ inches; length of intermaxillary and of mandible $1\frac{4}{10}$ inch.

7. REPORT ON A COLLECTION OF REPTILES AND FISHES MADE BY DR. KIRK IN THE ZAMBESI AND NYASSA REGIONS. BY ALBERT GÜNTHER, M.A., M.D., PH.D., F.Z.S.

(Plates XXVI., XXVII.)

A most valuable collection of Reptiles and Fishes made by Dr. Kirk, the scientific companion of Dr. Livingstone on his last expedition to Eastern Africa, having been presented by him to the British Museum, I beg leave to lay before the Society a full account of its contents, with descriptions of those species which appear to me to be new to science. The Tortoises and a part of the Saurians have already been noticed by Dr. J. E. Gray in the 'Proceedings' of this Society, 1864, p. 58, where also figures of two new Lizards have been given. In the determination of several of the species, I have been aided by a less complete series of duplicate specimens which had been sent home by Mr. C. Livingstone, and were presented by Earl Russell to the British Museum.

For almost all we know of the fauna of this part of Tropical Africa we are indebted to Professor Peters, who spent several years in the exploration of its zoological and botanical productions, and who reaped so rich a harvest. However, Dr. Kirk entered a country previously unexplored, the topographical features of which are given in the following notes, with which I have been favoured by Dr. Kirk:—

“The present collection is chiefly from the regions bordering the Zambesi, including those of the Nyassa Lake.

“Some of the fish were gathered in the Rovuma, which was explored for 115 miles in direct distance, at which point it becomes encumbered by rocks, and cannot be ascended further. This river, gathering the waters of the eastern slopes of the coast mountain-range which overhangs the Nyassa, opens to the Indian Ocean north of Cape Delgado.

“Above the Victoria Falls of the Zambesi and the Murchison Rapids of the Shire a marked difference in the fish fauna is met with. During the short time spent in the former region, many fishes with which I was not familiar in the lower part were observed; and the natives who accompanied us remarked of others met with near Tete,

and still more met with in the Nyassa Lake, that to them they were unknown. Without claiming for the negro any exalted place, still it cannot be denied that in such points as come under his daily observation, particularly as concerns his food, he is very accurate and discriminating.

“The knowledge possessed of wild game by the hunters of the desert is well known; and the different tribes depending on the produce of the waters are equally well acquainted with their inhabitants.

“By the Murchison Rapids, which break the River Shire in its upper third, the water of Lake Nyassa descends from its own level (1522 feet) nearly to that of the sea. The rapids are between forty and fifty miles in length, the greater part of the descent being effected at six or seven points, between which are minor rapids and smooth reaches crossed by canoes.

“The fishes of the lake are almost all of species peculiar; and a full collection of dried skins of those observed was made, excepting of the Siluroids, which, being large, incompressible, and oily, are peculiarly objectionable where portage is limited.

“Having passed the navigable part of the Shire above the Murchison Rapids and entered the Nyassa Lake in south lat. $14^{\circ} 25'$, an inland sea opened to us, lying nearly north and south, overhung by mountains on either side, which, as we sailed north, closed, and at last formed steep cliffs, against which the heavy swell dashed as on the sea-shore. The western side, which was the one followed, presented a variety of rocky headlands jutting out, sandy coves, and long flat beaches. Many good anchorages and sheltered harbours exist, which one day may be turned to account. At various parts the sounding-line was cast; but only at the southern end, where the Shire flows off, or very near shore was bottom found, the remainder being of the pale milky blue of tropical seas. In such parts, with 35 fathoms no soundings were obtained; and near the north, where, at a mile off shore, 115 fathoms were given out, a like negative result followed. The distance due north explored by us amounted to 200 nautical miles; there it became necessary to turn, leaving the end unknown. Yet we have reasons for considering that we were not many days from reaching the furthest end, which may be expected to be in the tenth degree of south latitude, and distant from the known part of the Tanganyika Lake 400 miles.

“The width of the Nyassa is not commensurate with its length, but varies from fifteen to sixty miles. At the narrow points it is crossed by native canoes; but at one of these the voyage is broken, and the night spent, on the large inhabited island of Chisomoro. Fed by the streams coming from neighbouring mountains, the level of the Nyassa rises during the floods 3 feet. No streams of any size were seen entering on the west, while the narrowness of the mountain chain on the east does not admit of any large supply from that side; so that should a river enter from the north, there will still be no more entering than may be accounted for by evaporation and the exit of the Shire.

“The native tribes on the shores are numerous, and in no other part was so dense a population seen; they are engaged in the slave-

trade, and, being in contact with those passing to the coast, are cowardly and treacherous; thieves on all occasions, they are never to be trusted; their civility and goodwill extend only to those who have the power to punish if otherwise treated. These people depend on the lake for much of their food, and from its waters draw abundant support with the minimum of labour. They display great ingenuity in their many contrivances for capturing fish, and, except fly-fishing, employ all the methods in use among more civilized races. The net in all its forms is in use, from the seine to the cast-net; yet, curiously, the manufacture is different, and the common reef-knot employed instead of our more secure method of netting. Fish-weirs are thrown across narrow entrances to lagoons; and fish-baskets, cleverly made of reeds or split bamboo, placed in likely spots, commonly near rushes and *papyrus* frequented by mud-fish. The fish-hook with bait is a common amusement with the children. In other parts the spear is dexterously thrown, and fish-poison used in favourable localities.

“Of the Zambesi fishes, many are peculiar to the brackish tidal creeks; others, such as the spotted electric fish, to the higher parts of the delta, and are unknown above; while some marine fish, as the Saw-fish, ascend far up, being common at Lupata, and far from rare at Tete, 260 miles from the coast.

“Above the rapids of Kebra-bassa many fine fishes were seen, which, if they exist elsewhere, are rare.

“That part of the Rovuma explored yielded a small number of fishes, many of which were unknown to me previously; but I was assured by the crew of the boat that they were to be found also in the Zambesi. The natives who then accompanied us had not the intimate knowledge of fish possessed by the people from the interior; but as the kinds referred to were remarkable and at once easily to be distinguished, it would appear that, if not the same, at least allied forms were familiar to them, which they confirmed by showing a knowledge of the habits, which proved accurate.

“The Rovuma is during the dry season a mere streamlet, winding from side to side along a sandy bed; but during the rains, swollen by mountain torrents, it becomes a large river, and opens to one of the finest bays on the East-African coast. As a trade entrance to the interior it is of no service; its banks are infested by the Tsetse fly, named there ‘Chipanga.’ The natives are notorious robbers, to whom honour is unknown, and by whom fair dealing is looked on as weakness; yet, like all such cowards, they fear those better armed than themselves.

“With my limited means of transport at command, from the most interesting places it was possible to bring off only the dried skins of many fishes, which, being dried and placed along with plants between paper, were easily preserved. Fish-poison, where it can be applied, forms one of the best means for obtaining a tolerably full series of the species of a certain locality. Few savage tribes are ignorant of some such agent: in the interior of Africa a *Gardenia* bush yields

it; in other parts the common sort is from a *Tephrosia*, while the muddy creeks of the coast are poisoned by the climbing stems of *Derris uliginosa* (Benth.). Fish-poisons do not act equally on all species; and occasionally some of the smaller will continue active and unaffected, long after many much larger ones have become insensible and either forced themselves on shore or floated on the surface. In the case of the poison from the *Derris*, this was noticed to be the case with the *Tetrodon*, which remained with a few others, not one of which came up, while the other inhabitants of the creek were dead.

“A table is here added, showing the mean temperature, during the year, of the African rivers: that of the lake, from the few observations made, seemed to differ but little from those of the rivers. The temperature of the rivers varies during the day from 2° to 3°, according to the amount of sunshine and the mass of water acted upon. This has reference to the water in the deep channel: where the river becomes much expanded, as over shallow banks, the temperature is much raised; but in the deep parts no temperature higher than 90° has been observed.

January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
82°·5	84°·6	83°·5	78°·5	75°·5	72°·0	70°·3	71°·8	76°·0	80°·9	82°·0	84°·6

“Of Snakes there are many kinds, in size varying from that of the Python to the small grass-snakes. A few species are extremely venomous, and cases are well authenticated of the same individual killing several large animals in succession. Yet the danger to the traveller is almost none: during five years spent in company with natives, exposed while passing through every sort of vegetation, no snake ever offered to bite me, and I have never seen another person bitten. Yet our party often numbered thirty, and often slept on the open ground exposed at night. Accidents do occur, but are extremely rare.

“Finally, I must add that this collection has been formed in a desultory manner, under circumstances not always the most favourable, and that it contains many imperfect specimens, which may prove difficult of determination.”

List of the Species.

Those marked with an asterisk (*) are new. Descriptions of those which have not been described elsewhere will form the last part of the paper.

TORTOISES.

Sternotherus subniger, Lacép.

SAURIANS.

- Crocodilus vulgaris*, Cuv. Tette.
Monitor niloticus, Cuv.
 **Teira ornata*, Gray, Proc. Zool. Soc. 1864, p. 58.
Gerrhosaurus robustus, Peters. Tette.
 **Euprepes kirkii*, Gray, Proc. Zool. Soc. 1864, p. 62.
 **Euprepes grantii*, Gray, l. c. p. 62.
E. punctatissimus, Smith.
 **Mochlus punctulatus*, Gthr.
 **Homodactylus turneri*, Gray, Proc. Zool. Soc. 1864, p. 59.
Phelsuma cepedianum, Cuv. Quellimane.
 **Lygodactylus strigatus*, Gray, Proc. Zool. Soc. 1864, p. 59.
Hemidactylus platycephalus, Peters.
Agama occipitalis, Gray.
 ? *Agama mossambica*, Peters. Quellimane.
Chamæleo dilepis, Leach.

SNAKES.

- Onychocephalus mucruso*, Peters.
Coronella olivacea, Peters. Quellimane.
 **Coronella nototænia*, Gthr.
Dasyeltis scaber, L.
Ahætulla irregularis, Leach.
A. semivariiegata, Smith. Shire valley. Ventral shields 190-193.
Bucephalus capensis, Smith.
Psammophis sibilans, L.
Leptodira rufescens, Schleg.
 **Chamætortus aulicus*, Gthr.
Boodon lineatus, D. & B.
Naja mossambica, Peters.
 **Dendraspis polylepis*, Gthr.
Clotho arietans, Merr.

BATRACHIANS.

- Cassina senegalensis*, D. & B.
Bufo guineensis, Schleg.
Hyperolius fornasinii, Bianconi.
H. tæniatus, Peters.
H. salinæ, Bianconi.
H. argus, Peters.
H. modestus, Gthr. Quellimane.
 **H. flavomaculatus*, Gthr. Rovuma Bay.
 **H. citrinus*, Gthr.
 **H. microps*, Gthr. Rovuma Bay.
Brachymerus bifasciatus, Smith.

FISHES.

- Ambassis commersonii*, C. & V.
Therapon servus, Bl. Mouth of Zambesi.
 **Pristipoma*, sp. n. (young specimen).

- Sillago acuta*, C. & V.
Psettus argenteus, L.
Equula fasciata, Lacép.
Mugil, sp. (young). Mouth of Zambesi.
 **Chromis squamipinnis*, Gthr. Lake Nyassa.
C. mossambicus, Peters. Lake Nyassa.
 **C. lateristriga*, Gthr. Lake Nyassa.
 **Hemichromis intermedius*, Gthr. Lake Nyassa.
 **H. robustus*, Gthr. Lake Nyassa.
 **H. longiceps*, Gthr. Lake Nyassa.
 **H. dimidiatus*, Gthr. Lake Nyassa.
Eutropius, sp. incerta (young specimens).
Synodontis schal, Bl. Schn. Rovuma.
 **Arius kirkii*, Günth. Fish. v. p. 163. Zambesi.
Brachyalestes acutidens, Peters.
 **Hydrocyon lineatus*, Schleg. River Shiré.
 **Distichodus macrolepis*, Günth. Fish. v. p. 362. River Shiré.
D. shenga, Peters. River Shiré.
Mormyrus macrolepidotus, Peters. Rovuma.
 **M. catostoma*, Gthr. Fish. vi. p. . Rovuma.
Albula bananus, Lacép.
Hydrargyra, sp.
Labeo congoro, Peters. River Shiré, below cataract.
L. cylindricus, Peters. Rovuma.
 **Pelotrophus microlepis*, Gthr. Lake Nyassa.
 **P. microcephalus*, Gthr. Lake Nyassa.
Pristis perroteti, Valenc.

Descriptions of New Species.

LIZARDS.

MOCHLUS (g. n. SCINCIDARUM).

Body and tail elongate; limbs feeble; toes 5—5. Snout depressed, wedge-shaped, the rostral shield being much broader than high, with a sharpish anterior edge. A pair of supranasals; nostril in the middle of a separate nasal shield. Scales perfectly smooth. Eyelid scaly; opening of the ear small. Palate toothless.

MOCHLUS PUNCTULATUS.

The supranasal shields are in contact with each other; the frontal and vertical form a broad suture together; four supraciliaries; two small anterior and two larger posterior occipitals with a small central shield between. Ear without lobules in front. There are seventy scales in a longitudinal series between mental shield and vent; the middle of the trunk is surrounded by twenty-eight series of scales. Limbs feeble. The length of the anterior equals the distance between the extremity of the snout and the front margin of the ear, and that of the posterior is one-third of the length of the trunk. The fingers are short, clawed: the third scarcely longer than the fourth; the

fourth toe a little longer than the third. There are three pairs of præanal scales, subequal in size; subcaudal scales not enlarged.

The upper parts are brown, many scales having a whitish or blackish dot; the blackish dots are predominant on the sides, where they are arranged in longitudinal series. Lower parts whitish.

	in.	lines.
Length of the snout	0	3
—— of the cleft of the mouth	0	6 $\frac{1}{2}$
Distance between snout and ear	0	7 $\frac{2}{3}$
Distance between snout and axil.....	1	2 $\frac{1}{2}$
Length of trunk	2	10 $\frac{1}{2}$
Circumference of trunk	1	11
Length of front limb	0	7
—— of third finger.....	0	1 $\frac{1}{3}$
—— of hind limb	0	11
—— of fourth toe	0	3 $\frac{1}{5}$

(Tail injured.)

SNAKES.

CORONELLA NOTOTÆNIA. (Pl. XXVI. fig. 1.)

Vertical shield elongate, nearly twice as long as broad, much longer than the two frontals together, and as long as the occipital, which is rounded behind. Rostral just reaching the upper surface of the head; loreal square; antecular single, large, extending to the upper surface of the head, but not reaching the vertical; two postoculars. Eight upper labials, the fourth and fifth entering the orbits, the last small; temporals scale-like, 1+2+3, the anterior the largest and in contact with both postoculars. Two pairs of chin-shields; the posterior are rather longer than the anterior, and pointed behind; there are four lower labials in contact with the front chin-shields. Scales in seventeen rows, with a single apical groove. Ventrals 177; anal bifid; subcaudals 76. Posterior maxillary tooth grooved.

Greyish brown: a deep brown band commences on the crown of the head, it being darkest and serrated on the anterior part of the body; it becomes fainter posteriorly, and is accompanied by a series of black dots on each side, which disappear on the tail. A brown line runs along the third outer series of scales, from the middle of the length of the body to the extremity of the tail; belly brownish yellow, marbled with brown.

Total length 14 $\frac{1}{2}$ inches, the cleft of the mouth measuring 4 lines, and the tail 3 $\frac{1}{5}$ inches.

I take this opportunity of substituting the name of *Crypsidomus* for that of *Rhamnophis*, which I had given to a genus of West-African Snakes (Ann. & Mag. Nat. Hist. 1862, p. 129), but which is preoccupied by a genus of East-African Ophidians described by Peters.

CHAMÆTORTUS (g. n. DIPSADIDARUM).

Body and tail of moderate length, rather compressed; head depressed, broad behind, and distinct from neck, with the snout rather short. Rostral shield of moderate size; nostril between two nasals; loreal united with lower anteorcular, entering the orbit; another anteorcular above. Scales smooth, with a single very small (or without) apical groove, those of the vertebral row not enlarged; subcaudals two-rowed. Posterior maxillary tooth longest, grooved.

CHAMÆTORTUS AULICUS. (Pl. XXVI. fig. 2.)

Shields on the upper side of the head normal; the vertical is elongate, twice as long as broad, much longer than the frontals together, and nearly as long as the occipital; the latter is rounded behind. The shield which represents the united loreal and lower anteorcular is subtriangular, as high as long; the upper anteorcular reaches just to the upper surface of the head. Eye of moderate size, with vertical pupil. Temporals 1+2+3, the anterior in contact with the postoculars, which are two in number. Eight upper labials, the third, fourth, and fifth entering the orbit. Ten lower labials, the five anterior of which are in contact with the front chin-shields. Two pairs of oblong chin-shields, the anterior being a little longer than the posterior. Ventrals 189, obtusely keeled on the sides; anal entire; subcaudals 86.

The head has a whitish ground-colour, but it is densely and symmetrically spotted with brown; a brown streak commences from the nostril, and passes through the eye to the angle of the mouth. Each labial and each scale on the temples and nape with a brown spot. Upper parts brown, with narrow whitish cross bars, which become less distinct on the hind part of the body, very similar to the markings in *Lycodon aulicus*. The white and brown colours are equally, though irregularly, distributed on the sides. Lower parts uniform white.

Total length 13 inches, the head measuring 5 lines, and the tail 3 inches.

DENDRASPIS POLYLEPIS.

Scales in 23 series; temporals 2+3, both anterior temporals in contact with the postoculars, the lower situated above the sixth and seventh upper labials. Ventrals 258; subcaudals 120. Dull greenish olive, hind part of the body and tail with small irregular blackish spots; inside of the mouth black.

The single specimen in the collection is 6 feet long.

FROGS.

HYPEROLIUS FLAVOMACULATUS. (Pl. XXVII. fig. 1.)

Tympanum scarcely conspicuous; tongue deeply notched behind; snout short, broad; upper parts quite smooth, dark violet, with rounded yellow spots irregularly disposed; one of these spots on

each elbow and heel; the hind margin of the fore arm and of the tarsus yellow. Upper lip yellow, lower parts whitish.

A single adult female specimen from the Rovuma Bay is in the collection.

HYPEROLIUS CITRINUS. (Pl. XXVII. fig. 2.)

Tympanum hidden; tongue deeply notched behind; snout rather short; upper parts with small scattered tubercles; the region between eye and axil finely tubercular. Entirely uniform lemon-coloured above and below.

I have examined two male specimens, one from the Senegal, and the other from the Zambesi Expedition.

HYPEROLIUS MICRIPS. (Pl. XXVII. fig. 3.)

Tympanum hidden; tongue broad and deeply notched behind; eye comparatively small, shorter than the snout, which has a sharpish canthus rostralis; upper parts smooth; belly finely and equally granulated. Greyish olive above; a whitish line runs along the canthus rostralis, and is continued behind the eye along the anterior half of the length of the body; its rostral portion has a brown inferior margin; upper parts of the head sometimes with a few minute brown dots. Lower parts whitish.

This is one of the smallest species, an adult male being only 10 lines long; it has the gular sac fully developed, and is from Rovuma Bay.

FISHES.

CHROMIS SQUAMIPINNIS.

D. $\frac{15-16}{10-11}$. A. $\frac{3}{9}$. L. lat. 33. L. transv. 4/14.

The height of the body is two-fifths of the total length (without caudal); the length of the head more than one-third. Teeth very small, in about three series in both jaws; there are about forty on each side in the front series of the upper jaw. The naked portion of the præoperculum is a little higher than long, and at the angle as wide as the scaly part of the cheek below the eye. Scales on the cheek in two series. Dorsal spines of moderate strength, not so strong as those of the anal fin; the dorsal rays do not extend to the caudal fin, when laid backwards. Caudal densely covered with minute scales. Pectoral long, sometimes extending beyond the middle of the anal. Silvery, with six black cross bands, the first in the middle of the nape; the second descends from the origin of the dorsal; the fifth from its end; the last on the root of the caudal. A black spot on the extremity of the operculum.

This species is similar to *C. niloticus*; but it may be readily distinguished by its much larger head, densely scaly caudal fin, and black cross bands. Several specimens were collected on Lake Nyassa, the largest being one foot long.

CHROMIS LATERISTRIGA.

D. $\frac{16-18}{9-10}$. A. $\frac{8}{9-10}$. P. 14. L. lat. 38. L. transv. 6/12.

Teeth very small. Scales below the eye in four series; eye rather small. Caudal fin scaly. A black band runs from the nape of the neck, along the upper part of the side, to the base of the caudal fin.

The skins of two examples have been preserved; the largest, 10 inches long, is from Lake Nyassa.

HEMICHROMIS INTERMEDIUS.

D. $\frac{16}{11}$. A. $\frac{3}{10}$. L. lat. 34. L. transv. 4/10.

This species connects *Chromis* and *Hemichromis*, having the general habit of the former genus, and the conical teeth of the latter. The height of the body is contained twice and three-fifths in the total length (without caudal); the length of the head nearly thrice. Head not much longer than high; snout rather elevated, and somewhat shorter than the postorbital portion of the head. Teeth minute, conical, of equal size, in a double series in the upper jaw as well as in the lower. The lower jaw projects a little beyond the upper, and the maxillary terminates somewhat before the vertical from the front margin of the orbit. Præorbital nearly square, and scarcely wider than the orbit. The naked præopercular limb is higher than long, and at the angle narrower than the scaly part of the cheek, the scales being arranged in three series. The dorsal fin commences above the upper end of the gill-opening; the spines are slender, and rapidly increase in length posteriorly, the length of the last being two-fifths of that of the head. The soft rays are long, increasing in length to the sixth and seventh, which extend nearly to the middle of the caudal fin when laid backwards. Anal spines stout; caudal emarginate, densely scaly; pectoral and ventral equal in length, the latter extending to the soft portion of the anal.

Back with some obscure cross bands; interradiæ membrane of the soft dorsal with a series of ocelli; anal with large round whitish spots.

A single example, 8 inches long, is in the collection; it is probably from Lake Nyassa.

HEMICHROMIS ROBUSTUS.

D. $\frac{16}{13}$. A. $\frac{3}{10}$. L. lat. 37. L. transv. 6/14.

The length of the head is somewhat more than the height of the body, which is one-third of the total length (without caudal). Snout compressed, long, rather high, somewhat shorter than the postorbital portion of the head. Teeth conical, of moderate strength, rather closely set, and slightly bent at the tip; they form two series in the upper jaw, and one in the lower. The lower jaw projects somewhat beyond the upper, and the maxillary extends nearly to below the centre of the orbit. Præorbital bone much wider than the orbit; the scales on the cheek are small, arranged in about ten series. Dorsal

spines of moderate length and strength ; the dorsal rays extend to the root of the caudal, when laid backwards. Caudal fin with an oblique truncated margin behind, and with scarcely any scales ; ventral rather longer than pectoral, extending to the vent.

Head and upper parts brownish ; operculum with a black spot behind ; a dark band runs from the opercular spot to the root of the caudal ; another band, parallel to the former, and indistinct, runs along the side of the belly. The soft dorsal and caudal fins with small round dark spots.

A specimen 12 inches long, from Lake Nyassa, is in the collection.

HEMICHROMIS LONGICEPS.

D. $\frac{17}{12}$. A. $\frac{3}{9}$. L. lat. 40. L. transv. 3/11.

Head and body elongate, as in *Cheilio* ; the height of the body is one-fourth of the total length (without caudal), the length of the head more than one-third. Snout elongate, longer than the post-orbital portion of the head. Teeth small, rather widely set, in two series in the upper jaw as well as in the lower, those of the outer series being larger than the very small ones of the inner ; the teeth in the upper jaw gradually decrease in length posteriorly. The lower jaw projects a little beyond the upper, and the maxillary terminates midway between the extremity of the snout and the front margin of the orbit. Præorbital bone much wider than the orbit. The naked præopercular limb is as wide as the scaly part of the cheek, the scales being arranged in three series. The lower part of the lateral line extends forwards to below the posterior dorsal spines, or even still further. The dorsal fin commences above the root of the pectoral fin ; its spinous portion is low, formed by feeble spines, the middle being equal in length to the diameter of the eye ; the soft portion is more elevated, but the rays, if laid backwards, do not extend to the caudal fin. The third anal spine is longer and stronger than any of the dorsal spines. Caudal fin slightly emarginate, with the lobes angular, and with the basal portion scaly. Pectoral and ventral rather elongate, the latter extending nearly to the vent.

Upper parts dark green ; sides and belly silvery ; operculum with a deep-black spot behind.

The skins of two specimens from Lake Nyassa have been preserved ; the larger is $9\frac{1}{2}$ inches long ; the natives called it "Sangwe."

HEMICHROMIS DIMIDIATUS.

D. $\frac{16}{10}$. A. $\frac{3}{10}$. L. lat. 33. L. transv. 4/11.

Similar to *Hemichromis longiceps* ; the height of the body is one-fourth of the total length (without caudal), the length of the head one-third. Snout pointed, elongate, longer than the postorbital portion of the head. Dentition and mouth as in *H. longiceps*. Præorbital bone much wider than the orbit. The naked præopercular limb is much narrower than the scaly part of the cheek, the scales being arranged in four series. Dorsal spines rather feeble, of mode-

rate length, the middle being longer than the diameter of the eye; the soft rays terminate at some distance from the root of the caudal, if laid backwards. The third anal spine is stronger, but not longer, than the posterior dorsal spines. Caudal fin slightly emarginate, with the lobes angular, the upper being somewhat the longer: two-thirds of it are scaly. Ventral longer than the pectoral. A narrow black band runs from the upper part of the gill-opening along the middle of the side to a blackish spot on the root of the caudal, dividing the body into two equal halves.

The skin of a single example, 9 inches long, from Lake Nyassa, has been preserved.

PELOTROPHUS (g. n. CYPRINIDARUM).

Distinguished from *Leuciscus* by the form of the anal fin, the anterior part of which is much elevated; whilst the posterior is very low, both parts being abruptly divided, &c.

PELOTROPHUS MICROLEPIS.

D. 13. A. 19. L. lat. 88. L. transv. 14/6.

The maxillary extends nearly to below the posterior margin of the eye. The last dorsal ray is vertically above the origin of the anal fin. The last six anal rays are short—only half as long as the ray preceding them. Bright silvery.

The skin of a single specimen from Lake Nyassa is 20 inches long.

PELOTROPHUS MICROCEPHALUS.

D. 13. A. 19. L. lat. 47. L. transv. 9/3.

The length of the head is contained five times and a half in the total (without caudal); the maxillary extends somewhat behind the vertical from the centre of the eye. The last dorsal ray is vertically above the anterior anal rays. The last six anal rays very short. Brownish above, silvery on the sides.

The skin of a single specimen from Lake Nyassa is 15 inches long.

8. ON THE ANGWÁNTIBO (*ARCTOCEBUS CALABARENSIS*, GRAY)
OF OLD CALABAR. BY T. H. HUXLEY, F.R.S., V.P.Z.S.

(Plate XXVIII.)

On the 25th of April 1860, Dr. John Alexander Smith read before the Royal Physical Society of Edinburgh a "Notice of the 'Angwántibo' of Old Calabar, Africa—an animal belonging to the family *Lemurina*, and apparently to the genus *Perodicticus* of Bennett."

The specimen from which this notice was drawn up was sent home by the Rev. Alexander Robb, who, in a letter dated July 28th, 1860, which is quoted by Dr. Smith, says, "Another specimen which I procured I handed to Mr. Thomson, who, I believe, sent it to Mr. Murray."